



ProCan: High hopes new cancer database will change diagnosis and treatment options

[PM](#) BY SARAH SEDGHI

UPDATED YESTERDAY AT 7:09PM

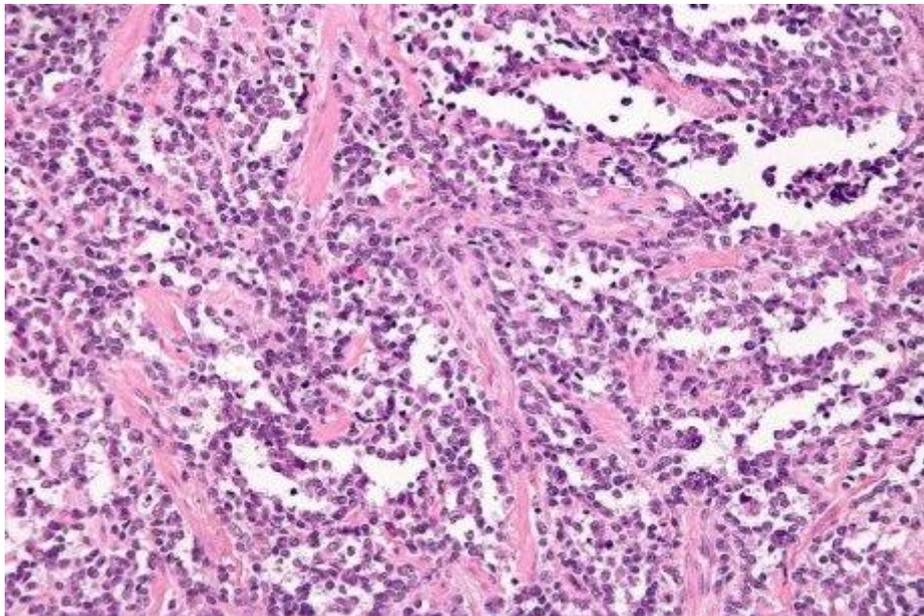


PHOTO: The database could help those treated with aggressive muscle-based rhabdomyosarcoma tumours.

Australian researchers hope a new database they are setting up will eventually lead to real changes in the way doctors diagnose and treat cancer.

Key points

- ProCan project will analyse proteins in 70,000 cancer samples over five years
- Database will become reference for recommending the best-known treatments for patients
- Combines new technologies with funding from Australian Cancer Research Foundation

The ProCan project will analyse the proteins of tens of thousands of cancer samples over a period of about five years.

Natasha's Doughty daughter Elizabeth was five years old when she began experiencing what they thought was reoccurring sinusitis.

"After going to the doctor three times they couldn't find anything, I went down to... Westmead Hospital and basically they did an MRI and from that moment on our life sort of changed," she said.

"She was diagnosed with a very aggressive tumour called rhabdomyosarcoma, which was a muscle-based tumour that was touching her brain in her eye orbit and basically behind the sinus of her face."

Elizabeth went through one year of chemotherapy and a month of radiation therapy.

"She's now happy at school, thriving, growing, playing soccer and dancing and t-ball, all those things that normal eight-year-old children do," she said.

"She doesn't have the sight in her right eye, however that's a minor price to pay if we've still got her here."

Around 600 Australian children are diagnosed with cancer each year.

The ProCan project, led by the Children's Medical Research Institute, could help children like Elizabeth in the future.

"This project will use a disruptive new technology to analyse the proteins, thousands of proteins in tens of thousands of tumours over the next five or so years," said Professor Roger Reddel, the director of the institute and co-leader of the project.

"This will allow us to change the way we diagnose cancer and it will give us the ability to put in the hands of cancer clinicians a way of predicting the very best treatments for the individual patient."

Hopes for 'tailor made' cancer treatments

The researchers will feed the information gathered through analysing the proteins of 70,000 cancer samples into a database which will be made available worldwide.

The long-term goal is for the database to become a valuable reference in recommending the best known treatments for patients.

Professor Phil Robinson, the head of the Cell Signalling Unit at the Children's Medical Research Institute and the project's co-leader, said they aim to build a database of all tumour types over the life of the project.

"At that point we'll be able to reference an incoming sample and reference against that to say, 'well, it's this kind of tumour, it's this kind of subtype, and here are the sorts of combinations of drugs or treatments that have been tried on people before that have either failed or not failed,'" he said.

The project has been made possible through new technologies and funding from the Australian Cancer Research Foundation.

For researchers like Professor Reddel, building on what science has already been able to uncover will help many more patients.

"We already use information like this in part to predict response to treatment," he said.

Ms Doughty hopes the project will lead to individualised treatment plans for children with cancer.

"What my five-year-old daughter needs and what someone else's five-year-old daughter... needs could be totally different, and if they were to tailor-make these treatment plans, then you may not have to go through so much intensive chemotherapy just because the protocol says," she said.

"It's basically tailor-making your cancer treatment so it's very exciting."